

319 Dakota -

Re^d with Surg'l's letter of Dec^r 23, 1881.

Cop^d sent to Indian Office Jan^r 24 1882

FIELD NOTES

OF THE SURVEY OF

Range Line

through

Townships 129, 130, 131 & 132 North

between

Ranges 7-8 & 7-9 being E Boundary of
the Standing Rock Indian
Reservation on the East
side of Missouri river

West of the 5th Principal Meridian.

DAKOTA TERRITORY.

Surveyed by

William W. Wofford Deputy Surveyor.

Under his command No. Special orders

Dated	October 27 th	1881
Survey Commenced	November 10 th	1881
Survey Completed	November 25 th	1881

Names and Duties of Assistants:

Will W. Duffield Jr. Comptroller.
Edward M. Brown Correspondent.
Herbert D. Dean Chairman.
Frank Cooley. "
George S. Stewart. "
Chas. Daniels. "
Edward Misam. Flagman.
Daniel Misam Mouth Shutter.
Charles Estey. "
Henry Buff. "
Austin W. Ross. "
Charles Misam Transcriber.
George Burnett. "
John Gray. Coast.

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Preliminary Oaths of Assistants.

WE Heribert Doane, Frank Conroy, George Stewart,
and Charles Donistad.

Do solemnly swear that we will well and faithfully execute the duties of chain carriers; that we will level the chain over even and uneven ground, and plumb the tally pins either by sticking or dropping the same; that we will report the true distance to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us in, the survey of the Meridian line through Township 129, Range 130, Section 17, 1/4 mile North, between Range 129 & 130, 0^o 44' 0^s.

Heribert Doane Chainman.
Frank Conroy Chainman.
George Stewart Chainman.
Charles Donistad Chainman.

Subscribed and sworn to before me this
3rd day of November 1881.

John E. Carlans Notary Public.

Burling B. W.

WE Will West sufficient, Edward McBrown, Edward Stevens,
James Stevens, Charles Conroy, Harry Puff, Andrew Todd
do solemnly swear that we will well and truly perform the duties of ~~hereinafter named~~
in the establishment of corners and other duties, according to instructions given us,
and to the best of our skill and ability, in the survey of the Meridian through
Township 129, Range 130, Section 17, between Range 129 & 130, 0^o 44'.
A.T.

Will W. Offield Jr. Commissioner, E. Stevens, H. Puff,
Edward McBrown Surveyor, James Stevens,
Charles Conroy, Harry Puff.

Subscribed and Sworn to before me this
3rd day of November 1881. A. W. Todd,
Surveyor.

John E. Carlans

Notary Public

Burling B. W.

Survey of Range Line through Township 129 north.
Sec. 17. 1/4 sec. 9. west. 5th of mer.

November 15th 1881. at 2.36 A.M. location being
on the 7th Standard Parallel or line lat. approx. 41° 55' 30".
Observed with a theodolite the meridian elongation
and altitude of Polaris. and determined the latitude
of the place of observation, and the stars agreed
as follows

Latitude.

Observed altitude of Polaris	41° 56' 00"
Correction for refraction.	- 06"
Latitude of place of observation.	41° 55' .04"

Azimuth

Polar distance of Polaris. 1° 18' 09" Log. Dist. 9. 361223
Lat. of place of observation 41° 55' 30" Log & Sec. 9. 611313
Azimuth of Polaris. 1° 53' 32" Log Dist. 9. 018808

Then deflecting 1° 54' to the right or Eastward from
the line of Polaris, meridian elongation. I establish
a true meridian, by driving two stakes or hubs, each
3 in dia. and 10 in. long. one north the ground.
and an 8 oz. carpet oak in each hub. on the
line where the same is crossed by the meridian

Survey commenced November 16, 1881, with a
theodolite and W. & L. E. Gurley's pocket Polar attachment.

Before commencing this Survey. I test the Polar
attachment on the meridian established and
find it correct.

I learned from Mr Louis Eggers. Indian Interpreter
at Standing Rock Agency that within a month
from the completion of the original Survey of
the 7th Standard Parallel the Indians had
pulled up and burned the posts and destroyed the
meridian, at the Standard Sec. and 1/4 Sec. Cr.
Also ascertained by personal observation
that the fire had swept through the grass of

Survey of Range Line through Township 129 North
 Dist. Range 78th West. 5th P. M.
 chains

cottonwood trees in which Standard Corner to Township 129 north Range 78th West has been established as described in the field note of the original survey, and that many of these trees were blown down; and also that the blazeed line, and marks, on the leaning trees had been burnt out, and obliterated by the fire. I therefore commenced at a point, on the open prairie, which I have cause to believe, is the Standard Corner to Sec. 32 & 33 Town 129 North. Range 78 West. The post has been destroyed, and the mound obliterated, but there were three pits 18 x 18 x 18 ins. each 5th f. dist. N. E. 7 W. of corner, and the trail described in the field note of the original survey was 9 chs and 44 links east of same. From this cor. I run west on a blazed line variation being $14^{\circ} 38' E.$, and at 9.10 I enter the burns and fallen timber, with a heavy undergrowth of willows and huckleberry and some brush; and at 14.0.0 I find no trace of the quartz post, but do find a Cotton-wood 20 ins. in diameter, bearing $4^{\circ} 38' E.$, 1. Chars 7 blcs. distant, and a cottonwood 18 ins. in diam. bearing $31.68^{\circ} W.$, 1 ch 7 1/2 blcs. distant both marked $\frac{1}{4}$ S. but there is no standing timber within 1 chain S. or N. of this cor. and I therefore infer that the course is the last bearing given in the original field note of $3.68^{\circ} W.$ is an error, and at 8.0.0 I find no post in mound as described in the original field note of survey, but do find a Post. Cor. with mound obliterated and three pits, each 18 x 18 x 18 ins. 5th f. dist. from Gr. and 31. 8. or. 18 in. apart, and a triangular stake 27 in. on each side, 2 f. long in the last pit, which being this post hole from first, was somewhat charred, but not so much as to

Resurvey of the Range Line through Township 129 North.
Bd. Range. 9800 ft. west of Sth O. m.

chains

obliterate the following marks

T 129 N. on 4th

R. 78 W., 6.83 on E. end

6.81 on E. face. north 5 minutes on E. and
1 minute on W. edges.

This therefore becomes the Standard Cor. 4th Ave.
S 129 N. Town 129 N., Range 78 West. described in the
field note of the original Survey.

From this corner date
continue the Standard West. V. of the compass
bearing 10° 58' E. and so

therefore I find no post, but to find the stump
of a fallen cottonwood, 24 ins. in diam. bearing
8.68° W. and distant 2 chains and 19 links, marks
148 as described in the field note of the original
Survey, and at

80.00 I find the remains of a charred post in the ground
with all of its marks obliterated, and three living
trees of the same size and character as those
described in the field note of the original Survey
but the bearings, distances and marks, are as
follows:

A cottonwood 29 ins. in diam. bearing 3.68° W.
distant 28 links, marks T. 129 N. D. T.

A cottonwood 30 ins. in diam. bearing 11.10° W.
dist. 14 links. marks T. 129 N. R. 78 W. S. 36. D. T.
A cottonwood, 30 ins. in diam. bearing 11. 80° E.
dist. 17 links. marks T. 129 N. R. 78 W. S. 31. D. T.

From this corner & continue the Standard Ave.
west, a distance of 1/2 chains, and 7 links, to the
left, or eastern bank of the Missouri River,
and find that this river has washed away
upward of a chain from off its left, or eastern
bank, and carries with it the meander corner
and bearing tree, established at 18.10 + 10 links
west of the Standard Township Cor. as described

Survey of the Range line through Township 129th North.
(Sec. 18 ranges 7 & 8 sq. miles. 5th P. R. W.)

Chancery

in the field notes of the original survey.

I therefore destroy the chain post at this
Township corner and replace it with a new
one, and still leaving the old marks on the bearing
trees. The bearings remain the same as originally
and re-establishes the corner. Dist. E. 6 dwp 129
N., R. 7 8 sq. miles. as follows.

Dist. post 4 1/2 ft. long. 4 ins. sq. with a white glass
drachm vial cont'd. containing a slip of card
bearing marks. "S. C. T. 129 N. R. 7 8 sq. miles." As main
ch. ground for Chancery. Dist. 6 dwp 129 N., R. 7 8 sq. miles.

S. C., T. 129 N. on N.

R. 7 8 W., 831 on E. end

R. 7 8 W., 636 on W. face.

with 6 notches on N. E. and W. faces. from which
a cottonwood. 30 ins. in diam. base. N. 80° W. dist.
1 1/2 ft. marks. T. 129 N., R. 7 8 W., S. 86. D. T.

A cottonwood. 30 ins. in diam. S. N. 10° W. dist. 1 1/2 ft.
marks T. 129 N., R. 7 8 W. S. 86. D. T.

A Cottonwood 28 ins. in diam. S. S. 88° W. dist. 1 1/2 ft.
marks T. 129 N., R. 7 8 W. S. 86. D. T.

Openings.

North lat. Dec. 31 1886.

Nor. 14° 32' E.

Through burns and fallen timber and a dense
undergrowth of willow, hawthorn and wild rose
brush, over nearly level ground.

3.3.21 A Cottonwood 28 ins. diam.

40.00 Dist. post 3 ft. long. 4 ins. sq. with a white glass
drachm vial. cont'd. containing a slip of card
bearing marks "N. S." 3 1/2 ins. in the ground. for "W. Dec. 31
marks 1/2 ft. on w. face from which

Recovery of Range Line through Comonships 129 North.
 (Ref. Range. 78079 miles. 5th C.M.)
 Chain.

5.

A cotton wood. 20 ins. in diam. bears. N. 70° E. distans
 74 rods. marked 1/4 S. C.T.

A cottonwood 15 ins. in diam. bears. S. 80° W. distans
 20 rods. marked 1/4 S. C.T.

I find no trace of fence in mind, nor of the
 two bearing trees. (Cottonwood, described in the field
 notes of the original survey.)

Nov 15. 1891.

weather dark and overcast with prospect of
 snow storm. Impossible to use solar attachment.

Nov 16. 1891.

5.1.37 Cottonwood. 12 ins. in diam.

78.1.7 Cottonwood. 22 " "

79.1.4 The corner described in the field notes of original
 survey for Sections 20, 30, 31, & 36. is 1/4 S. 80° E.
 East of this. Post is gone and the four bearing
 fallen, but the stumps were found, with the
 following bearings distances. and marks.

A cottonwood 15 ins. in diam. bears. N. 45° E. 20 rods
 dist. marked T. 129 N., R. 78 W., S. 30. D. T.

A cottonwood. 19 ins. in diam. bears. S. 45° E. 20
 rods dist. marked T. 129 N., R. 78 W. S. 30. C.T.

A cottonwood 10 ins. in diam. bears. S. 0° W. 81 1/4 rods
 dist. marked T. 129 N., R. 78 W. S. 30. P.T.

A cottonwood. 10 ins. in diam. bears. N. 45° W. 81 1/4 rods
 dist. marked T. 129 N., R. 78 W. S. 30. P.T.

8a.0. A post 4 ft. long. stain eg. with a white glass
 broken trial corded. containing a slip of card board
 marked. "Cor. 6 5° 35'. 30. 21 1/2 rods, T. 129 N., R. 78 W. S. 30
 ins. in the ground. for this Sec. 20. 30. 31 1/2 rods
 T. 129 N., S. 30 on NE.

R. 78 W., S. 30 on NW face.

S. 30 on SW face

N. 30 on NE face. with 8 notches on N. 30
 notch on S. edges.
 from which.

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A Survey of Range Line through Township 129 North.
Between Ranges 7 & 8 1/4 west. 5th P. M.

Chain

	A cottonwood 7 miles. in diam. bears N. 88° E. 4.600 distant, marsh'd T. 129 N., R. 7 1/4 W., S. 34. B.T.
	A cottonwood 18 miles in diam. br. S. 86° E. 3.700 lots. distant marsh'd T. 129 N., R. 7 1/4 W., S. 34. B.T.
	A cottonwood 10 miles. in diam. bears N. 85° W. 3.600 distant, marsh'd T. 129 N., R. 7 1/4 W., S. 35. B.T.
	A cottonwood 12 miles. in diam. bears S. 80° W. 4.600 lots. dist. marsh'd T. 129 N., R. 7 1/4 W., S. 34. B.T.
	Cult. land bottom Soil black alluvial. 1 ^{1/2} " soil.
	80 chains of timber, burnt and fallen cottonwood and occasionally Elm. with dense undergrowth of willow. Raspberry and wild rose brush.

North cut. Sec. 25 1/20.

V. A. 14° 32' E.

5.35	A cottonwood 20 ins. in diameter.
8.05	Raspberry, 6 ins. in diameter
16.10	Eelm 8 ins. in diameter.
110.00	On a post 8 ft. long. 4 ins. sq. with a white glass brace on it worked, containing a slip of card board marsh'd $\frac{1}{2}$ " 8" 24 ins. in the ground for 1/4 sec. too. marsh'd $\frac{1}{2}$ " on w. face, from which A cottonwood 18 ins. in diam. bears. S. 86° E. 1.000 ins. dist. marsh'd $\frac{1}{2}$ " S. B.T.
	A cottonwood 20 ins. in diam. br. N. 85° W. 70 lots. distant. marsh'd $\frac{1}{2}$ " S. B.T.
	Offer no trace of the 1/4 sec. too. described in the field notes of the original survey.
111.01	A Cottonwood 15 ins. in diameter.
113.02	Larch timber, but the dense undergrowth of willow and Raspberry continues.
178.00	Leave undrawn.
180.00	On a post 4 1/2 ft. long. 4 ins. sq. with a white glass brace on it worked, containing a slip of card board

Survey of Range Line through Township 129 north.
Between Range 7 & 8, 1st pr. S. D. C. M.
Chain

marked. "Cor. to S. 19. 2d, + 5. 180. T. 129 N. R. 7 1/2 E. W.".
13 ins. in the ground, for cor. to sec. 19. 180. 19. 2d, + 5. 180.

marked.

T. 129 N. S. 19 on N. E.

R. 7 1/2 E. 8. 300 on S. E.

8. 400 on S. W. sec.

8. 7 1/2 W. 8. 200 on N. W. faces.

with a notch on N. & 2 notches on edges. Dry pits 18x18
12 ins. in each sec. 5 1/2 ft. dist. and raises a mound of
earth 2 ft. high. 4 1/2 ft. base around foot.

I find no trace of the corner to sec. 19. 2d, N. R. 7 1/2 E.
described in the field notes of the original survey.

Hard rock

Soil black alluvial. 1 ft. soil.

4 ft. 2 chains of timber, burnt, and fallen from
wood, with an occasional elm.

November 17, 1881, as now observed Latitude
with Polar attachment

Lat. $45^{\circ} 5' N.$

North Ext. Sec. 19. 2d

Va. $14^{\circ} 56' E.$

32. 1/2 Wagon road. Curve N. 45° W.

3. 5. 8. 3 Telegraph line "

At this point the line leaves Missouri River
bottoms.

40. 0. 0 At a post 3 ft. long. 3 ins. sq. with a white glass
broken at center, containing a slip of card
board marked. "1/2" 12 ins. in the ground, for cor.
to sec. 18. marked "2. 6. on N. W. face. Dry pits 18x18
ins. N. 1/2 of post. 5 1/2 ft. dist. and raises a mound of
1 1/2 ft. high. 3 1/2 ft. high base around foot.

53. 4. 0 Old wagon road. Curve N. 46° W.

7. 9. 8. 5 From this point the cor. to sec. 18, 16, 19 runs.

Resurvey of Orange River, through township 129 north.
 Between Orange, 78 1/2 rods. S. 1/4 P. sec.

Chain.

	described in the field notes of original survey, is 14 chains and 88 links. East. Post is gone, mound obliterated, but there are traces of four pits 8 ft. distant from corner.
80.00	Set a post 14 1/2 ft. long, 4 in. sq. with a white glass broken vial vials, containing a slip of card board marked "Gr. 6 Secs. 13, 18, 19 & 20, T. 129 N., No. 78 1/2 N.", 12 in. in the ground, for Gr. 6 Secs. 13, 18, 19 & 20, T. marked.
	T. 129 N., 8 1/2 sec. N. E.
	R. 78 1/2, 6 1/2 sec. S. E.
	6 m. on S. W. end
	S. 79 W., 6 1/2 m. N.W. face.
	with 3 notches on N. W. edges. Dig pits 18 x 18 x 2 ins. in each sec. for 5 1/2 ft. dist. and raised a mound of earth 2 ft. high. 2 1/2 ft. base around post. Land. 8 1/2 miles level, 1/4 mile slightly rolling. Soil on level black alluvial, 1/4 mile, on rolling portions sandy loam 2 miles. No timber.

North lat. Secs. 18 & 19.

Nor. 14° 30' E.

17.10	Dry channel, 6 rods wide. Course N. 88° W.
27.02	Streams, 10 rods wide. " S. 46° W.
40.00	Set a post 8 ft. long, 3 in. sq. with a white glass broken vial vials, containing a slip of card board marked "1/4 S. 12 ins. in the ground, for 1/4 Sec. 20, marked 1/4 S. on N. face. Dig pits 18 x 18 x 2 ins. at S. of post. 5 1/2 ft. dist. and raised a mound of earth 1 1/2 ft. high. 3 1/2 ft. base around post.

I find no traces of the 1/4 Sec. 20, described in
 the field notes of original Survey.

November 17, 1881.

Resurvey of Range line, through Township 189. North.
 Ch. Belvoir Range, 1879 West. 5th P.M.
 Chain.

- 54.00 Stream 10 rods wide. course. S. 10° E.
 72.00 Barne " 11 " " " S. 15° W.
 76.00 Barne " 12 " " " S. 21° E.
 80.00 Barne a pool 4 1/2 f. long. 4 ins. sq. with a white glass
 decanter with corked containing a slip of card.
 Board marked. "Cor. 6 acres. T. 12 R. 18 T. 18 R. 17
 1879 W" 12 ins in the ground. for cor. 6 acres.
 T. 12 R. 18 T. 18. marked
 T. 12 R. 17 on N. E. face.
 T. 12 R. 18 on S. E. face.
 S. 18 on S. E. and
 T. 12 R. 18 on N. W. face.
 with 2 molches on N. & 1 molch on S. edges. Dog pine
 18 x 18 x 1/2 ins. in each acre 5 1/2 f. dist. and raised a
 mound of earth. 2 f. high. 1 1/2 f. base around
 pool.
 1 and high, rolling.
 tree sandy loam. 300 rods
 to timber

North Res. Secs. 942.

V. 14° 35' E.

- 16.00 Dry ravine. 5 rods wide. course. S. 45° E.
 23.01 Crest of ridge.
 34.00 Ravine about 2 f. deep. 2 rods wide. course S. 30° E.
 40.00 Barne a pool 8 f. long. 6 ins. sq. with a white glass
 decanter with corked containing a slip of card
 board marked. "6 1/2" 12 ins in the ground. for 1/2
 acr. cor. marked 1/8 on w. face. Dog pine 18 x 18 x 1/2 ins.
 5 1/2 f. of pool. 5 1/2 f. dist. and raises a mound of
 earth 1 1/2 f. high. 3 1/2 f. base around pool.
 46.02 Ravine about 18 f. deep. 10 rods wide. course N. W.
 63.03 Ravine " 17 f. deep. 80 " " " S. 30° W.
 with a few bare trees widely exposed.
 70.00 Top of hill. with out crop. of sand stones.

Recovery of Range Line, through Township 129 North.
Between Ranges, 78 1/2 west, 5th P. M.

Chains

80.00	Set a post 47 ft. long, true, sq. with a white glass drachm, red coated, containing a slip of card board marked "Gr. 16.912 T. 129 N. R. 78 1/2" 12 ins. in the ground, for Gr. 16.912 marked.
	T. 129 N., & 6 ins. 21.8° E.
	R. 78 1/2 W., 8 7 ins. S. E.
	8. 12 ins. S. W. and.
	R. 78 1/2 W., 8 1 ins. N. E. of post.
	with 1 notch on N. & S. sides on S. edge. Dry pine 18 x 18 x 1 Run. in each end. 5 1/2 ft. dist. and raised a mound of earth 2 ft. high. 1 1/2 ft. base around post.
	RAins very high and rolling.
	Soil sandy loam. 3 rd soil.
	No timber except the few scattering trees in ravines.

North lat. dec. 176.

V. 14° 30' E.

16.00	Dry channel. 10 estd wide. curves. 8.85° E.
16.00	Set a post 47 ft. long, true, sq. with a white glass drachm red coated, containing a slip of card board marked "1/2 8" 12 ins. in the ground, for 1/2 Dec. cor. marked 1/2 8 on N. face. dry pine 18 x 18 x 1 Run. N. W. of post. 5 1/2 ft. dist. and raised a mound of earth 1 1/2 ft. high. 3 1/2 ft. base around post.

November 18, 1881, at noon, observed latitude with solar attachment. Lat. 46° 00' N
At 12.30 P.M. the wind hauled to the north.
and was blowing fresh, with the thermometer at -16°; and a blinding fall of snow, so that all further use of the solar attachment became impossible

Nov. 18, 1881.

Survey of Range Line, through Township 129 north.
Missouri Ranges. 1st sec. line, 5th P. M.

Chains

	Westerly drift and outcrop. Impossible to see below attachment.
80.00	Set a post 4 1/2 ft. long. This post with a white glass marker, red corral, containing a slip of card board, marked "T. 129 R. 129 S. 10 E., Pt. 1st sec. 6th line in the ground, for T. 129 Corralshipo. 12900000. Ranges. 9:57 A.M. marked. T. 129 N, 6. 31 on N.E. R. 98 2nd S. 6 on E.E. T. 129 N, 6. 1. on SW. and R. 98 2nd S. 36. on NW. face. rough & notched on each edge. Digged at 45° to an angle on each line. N. S. E. W. off post. 6 feet. decent, and raised a mound of earth 2 1/2 ft. high. of. base round post.
	Shows no trace of the township corners described in the field notes of the original survey.
	Land high and rolling. soil sandy loam, 2' or 3' thick, with outcrop of the summit of the higher hills. no timber.

General Description

The townships on each side of this line for about
5 miles in the Missouri River bottom the remaining
portions are high and rolling. The soil of the
Missouri River bottom is a black alluvium, 1' thick.
which are rolling portions have a clay loam top
and a sandy wash. 2' or 3' soil in the valley, and on
the summits outcrop of sandstone, and loose
rock, and gravel, unless for alluviation.
They are washed by two small streams which

R. G. C.

Recovery of Range Line, through Township 129 South,
Between Range 9 and 10 west. Oct. 9, 1881.

falling into the Missouri River.

The only timber found on this line, is at its extreme southern extremity, and consists of burnt and fallen cottonwood and an occasional live tree, worthless for all purposes, except for fuel.

November 19, 1881.

W. W. Duffield.

U. S. Surveyor.

Review of Range Lines through Township 180 North.
Between Survey 78779 West, 6th P. M.W.
Change

From corner to Township 179 N. 20 North.
Ranges. 78779 west. which is a good. Univ. of
Marble.
T. 180 N., 89 W. S.
R. 78 W., 8th E.
S. 129 N., S. and S. W. and
R. 79 W., S. and S. W. faces.
with 6 notches on each edge. and falls N. S. 87 W.
of post. 6 feet. dist. and mound of earth around
post base.

North End. Sec. 31836.

Va. 14° 50' E.

18.61 Flag Staff at F. & G. Gates. Grandly Rock Box.
41.56 0790.

74.80 Having about 5-6 ft. deep. 12 in. wide. Dens. N. 87 W.
40.00 Set a post 6 ft. long. 3 in. sq. with a white glass
bracket and corbel. containing a slip of card
board marked "N. 87 W. 12 in. in the ground. for
the sec. cor. marble 1/2 S. on 20. face. orig. 1881
1881 2 in. N. S. of post. 5 1/2 ft. dist. and raised a
mound of earth 1/2 ft. high. 8 1/2 ft. base around
post.

I find no traces of the 1/2 sec. cor. described
in the full notice of the original Survey.

61.65 Flag Staff at F. & G. Gates Box. N. 60° 14' 20"

79.02 Top of hill. about 200 ft. high.

80.00 6th post 6 1/2 ft. long. 4 in. sq. with a white glass
bracket. and corbel. containing a slip of card
board. marked. "N. 6 8° 25.30. 3176. T. 180 N. R. 78
1/2 in. 12 in. in the ground. for N. 6 8° 25.30.
01836. marble.

T. 180 N., 8 80 on N. E.

R. 78 W., 8 81 on S. S.

0.86 on S. W. and

Resurvey of Range Line through Township 130 north.
Between Ranges 9 & 117, west. 5th P. m.

Ordnance

R. 99 west. S. 25 on N.W. faces.
with 2 moleholes on N. end, 1 molehole on S. edge. Dug post
18x18x12 ins. in each sec. 5 $\frac{1}{2}$ ft. dis. and raised
a mound of earth 2 ft. high. 4 $\frac{1}{2}$ ft. base, around
post.
I find no trace of the Sec. Cor. described in
the field notes of the original survey.
Land very high and rolling.
Soil sandy loam. 8th rate in valley.
Lava rock and gravel. worthless for cultivation
of the hills.
No timber.

North End. Secs. 3 & 7 sec.

Va. 14° 32' E.

34100 Dry channel. 6 rods wide. Course N 44° W.
40.00 Post a foot 8 ft. long. 3 ins. sq. with a white glass
drasher in at bottom containing a slip of
card board marked "1/2 S" 12 ins. in the ground
for 1st Sec. Cor. marked 1/2 S on W. face. Dug post
18x18x12 ins. N. S. of post. 5 $\frac{1}{2}$ ft. dis. and raised
a mound of earth 18 ft. high. 3 $\frac{1}{2}$ ft. base
around post.
I find no trace of the 1st Sec. Cor. described in
the field notes of original survey.
80.00 Post a post 4 $\frac{1}{2}$ ft. long. 6 ins. sq. with a white
glass drasher in at bottom containing a slip of
card board marked. To 6 Secs. 19, 24, 35, 36, 37, 38, 39.
R. 9999 W 12 ins in the ground, for Post 6 Secs.
19, 24, 35, 36, 38, 39. Mashed.

T. 130 N., S 19 on N. E.

R. 98 20, 6 20 on S. E.

S. 25 on S. W. ends

R. 99 w., S 25 on N. W. faces.

with 2 moleholes on N. & 2 moleholes on S. edges.

Recovery of Raug Line through Township 130 North.
Colo. in Blanges. 7607 ft. West. 5th O. M.

Dug pits 18x18x12 ins. in each sec. 5th f. dist.
and raised a mound of earth. 2 ft. high. 4¹/₂ ft.
base around posts.

I find no trace of the Sec. cor. described in the
field notes of original survey.

Walls high and rising.

Soil sandy loam. 2nd soil.

No timber.

November. 21st, 1891. at noon observed
latitude with solar attachment

Lat. 46° 02' N.

North Sec. Secs 19 & 34.

Va. 111° 32' E.

40.00 Set a post 3 ft. long. 2 ins. sq. with a white glass
drachm viral cord containing a strip of card
board marbled "HS" 12 ins. in the ground. for
1/2 sec. cor. marked 1/2 S. on w. face dug pits 18x
18x12 ins. 2 ft. 8 in. from post. 5th f. dist. and raised a
mound of earth. 1¹/₂ ft. high. 3¹/₂ ft. base. around
post.

I find no trace of the 1/2 Sec. cor. described in the
field notes of original survey.

80.00 Set a post 1 ft. f. long. 2 ins. sq. with a white
glass drachm viral cord containing a strip
of card & card marbled "Br. 6 5" 10.10.1903 N. 5.32 E.
2nd 7607 ft. 12 ins in the ground. for Br. 6 Secs.
13, 12, 19, 7 & 3. Marbles.

B. 130 N., S. 180 W. N. E.

B. 130 W., S. 19 W. S. E.

S. 30 W. S. W. and.

N. 79 W., S. 13 on N. W. faces.

with 3 moltes on N. and S. edges. Dug pits 18x
18x12 ins. in each sec. 5th f. dist. and raised
a mound of earth 2 ft. high. 4¹/₂ ft. f. base

Resurvey of Range Line through Township 130 north.
Belvidere Range, 18879 West. 5th S. M.
Chase

	<p>around post. I find no trace of corner described in field notes of original survey. Same high walling. Soil clay loam 1' soil. No timber.</p>
--	--

North Line, Sec. 13771.

V. 14° 55' E.

150.00	<p>Set a post. 3 ft. long. 6 in. sq. with a whitish glass vial corked containing a strip of card board marbled. "1/2", 12 in. in the ground. for 1/2 acre cor. marbled. 8 on W. face. dry pit 18 1/2 x 12 in. N.E. of post. 5 1/2 ft. dist. and raised a mound of earth 1 1/2 ft. high. 3 ft. off base around post. I find no trace of the 1/2 acre cor. described in the field notes of the original survey.</p>
200.00	<p>Set a post 1 1/2 ft. long. 6 in. sq. with a whitish glass vial corked containing a strip of card board marbled. "Cor. 6 S^E q. 1/2, 4 1/2 x 12, T. 130 N, R. 18879 W. 12 in. in the ground for 6 1/2 acres. T. 130 N, 8 on N.E. R. 18 W, 8 1/2 on S.E. 8 1/2 on S. W. and 8 1/2 W, 8 1/2 on N.W. faces. with 2 notches on N. & S. sides on S. edges. dry pit 18 1/2 x 12 in. in each are. 6 1/2 ft. dist. and raised a mound of earth 2 ft. high. 2 1/2 ft. from around post. I find no trace of the original cor. described in the field notes of the original survey. Same walling. Soil sandy loam. 2' soil. No timber.</p>

Survey of Range Line through Township 130 north.
 (Bed. Changes. 1800 ft. elev. 5th fl. m.).
 chains.

North Det. sec. 7 & 12.

Nov. 14th 1881.

- 6.03 East tail crest. 600 rods N. D. S. 81° 20'.
 4.0.0 At a post 4 ft. long. 4 in. sq. with a white glass
 bracket and cord containing a slip of card
 board marked. $\frac{1}{4} \times 5^{\circ}$. 12 in. in the ground. for 1/12
 sec. cor. in marked 1/12 on W. face. dug pit 14 x 14
 1/2 in. N. E. of post. 0 1/2 ft. dist. and raised a
 mound of earth. 1 1/2 ft. high. 0 1/2 ft. base around
 post.

I find no trace of 1/12 sec. cor. described in the
 first note of the original Survey.

Nov. 21st 1881.

Weather dark and overcast. Impossible
 to use solar attachment.

Nov. 23rd 1881.

- 1/8.60 dry channel 1000 rods. Dusse. S. 45° 20'.
 8.0.0 At a post. 4 1/2 ft. long. 4 in. sq. with a white
 glass bracket and cord containing a slip of
 card board marked. $\frac{1}{4} \times 5^{\circ}$. 1. c. 9.12. T. 12. N. 12°
 7800 ft. 12 in. in the ground. for 1/12 sec.
 1/12. marked.

T. 12 N. 12. 6.6 on 21. E.

R. 7.8 W. 6.6 on 8. E.

8.1 on 8. W and

R. 7.9 W. 6.1 on 21. W. faces.

with 1 rock on N. 1/2 north on S. eyes. dug pit 14 x 14
 1/2 in. in each sec. 0 1/2 ft. dist. and raised a
 mound of earth. 2 ft. high. 0 1/2 ft. base around
 post.

I find no trace of corner. described in the first
 note of original Survey.

Land high and rolling.

but sandy loam soil.

Mulches.

Survey of Range Line through Township 130 North.
Sec. 14. Range 78 on 9th west. 5th P.M.
Chairs

	North line Sec. 1 S.E.
	V. a. 10° 00' E.
10.00	Out crop of Sand Stone.
40.00	Set a post 4 ft. long. 4 in. sq. with a white glass drachm vial attached containing a cap of carboard marked "S" this. in the ground. for N. line. Cor. marked 74.8. on W. face. Avg. pit 18 x 14 x 12 in. 51.5 of post. 5 1/2 ft. high. and raised a mound of earth 2 1/2 ft. high. 3 1/2 ft. base around post.
79.50	The dep. cor. described as. C. in M. in chief note of the orig. in at Survey. is 9.07 ch. S. of line. The barrel measure of the old post. is left. and traces of a mound and of four pits still visible on very close inspection.
80.00	Set a post 4 1/2 ft. long. 4 in. sq. with a white glass drachm vial attached containing a cap of carboard marked "C" 6.8° 130.0001 N. R. 70.77 W. 12 in. in the ground. for Post. to dep. 100' 101.5. avg. 59.25. marked.
	P. 181 N. & 81 on N.E.
	P. 78 20.6. 6 on S.E.
	P. 120 N. 8.1 on S.W. and.
	P. 79 W. 3.86 on N.W. face with 6 notches on each edge. Avg. pit 21 x 18 x 12 in. lengthwise on each side. N. S. E. W. off post. 5 1/2 ft. high. and raised a mound of earth. 2 1/2 ft. high. 5 ft. base around post.
	Sand high. and rocky.
	Soil sandy loam.
	2 nd sat.
	No timber.

Survey of Range line through Township 120 North
(West Range) 78^{ff} rods. 5th P. M.

General Description.

The Townships on each side of this line are high and rolling, with a second soil, sandy loam soil.

They are watered by Cat. Tail Creek, a stream of clear pure water, with high banks, and a hard gravelly bottom.

On each side of this creek, a broad level strip of bottom is found, admirably adapted for cultivation.

The high and rolling portions of the townships are well adapted for grazing purposes.

No timber of any description is found in either of these Townships.

November 22, 1881.

W. W. Buffield,
Deputy U. S. Surveyor.

Reservoir of Bangs Mine through Township 131 North
 Section 18, Blk 1, Range 78 1/2 West. 5th C. M.

From corner to Township 130 & 131 N. R. 78 1/2 W.
 which is a post mine, sq. marshes.

T. 131 N., S. 31 on N.E.

R. 78 W., S. 6 on S.E.

T. 130 N., S. 1 on S.W. and

R. 79 W., S. 86 on N.W. faces.

with 6 notches on each edge. and pits N.E. E. W.
 of post of f. dist. and around of each corner, from
 base.

North Ext. Secs. 81 & 36.

Va. 15° 00' E

at 0,000 Let a post 3 ft. long. 3 in. sq. with a white glass
 drachm vial coated containing a slip of card
 board marked "T. 131 N. R. 78 1/2 W. 12 in. in the ground. for 1/2
 sec. on marshy soil. 20 ft. face. dug pit 18 x 18 x 2 ft.
 1/2 ft. dist. and raised a mound of earth 1 1/2 ft.
 high 8 ft. base around post.

at 0,200 Basin about 60 ft. deep 2 chs. wide. Curve 31, 70° W.
 with heavy out crop. of Sandstone on the side.

at 0,300 Let a post 4 1/2 ft. long. 3 in. sq. with a white
 glass drachm vial coated, containing a slip
 of card board marked "T. 131 N. R. 78 1/2 W. 12 in. in the ground. for 1/2 sec.
 25, 30, 31 1/2 ft. marshes.

T. 131 N., S. 30 on N.E.

R. 78 W., S. 81 on S.E.

S. 86 on S.W. and

R. 79 W., S. 25. on N.W. faces.

with 5 notches on N. and 1 notch on S. edges.
 Dug pit 18 x 18 x 2 ft. in each sec. 5 1/2 ft. dist.
 and raised a mound of earth 2 ft. high. 4 1/2 ft.
 base around post. No traces of old Gr.
 Land rolling.

Soil sandy loam. 2' soil.

No timber.

Review of Range Line through Township 131 North.
of Rainy Mts. Between Range 180 & 181 West. 4th P. Mer.

November 28th 1881 at noon, observed latitude
with solar attachment.

Lat. $46^{\circ} 06' E.$

North lat. sec. 20 & 20.

Var. $14^{\circ} 32' E.$

- .10 Southern bank of a drawpond.
 7.02 Northern " same form. It is 8.00 dm
wide & 3.00 dm. w. of line.
 40.00 It is a pool 6. factory. Lino. sq. with a white glass
drachin oval marks. containing a slip of card
board marked $\frac{1}{2} S^{\circ} E^{\circ}$ 12 in. in the ground. for 14
sec. cor. marble is 8 on W. face. Dug pit 14 x 6 x 2
dm. 7.05 off pool. 3/4 ft. dist. and raised a mound
of earth 1/2 ft. high. 3/4 ft. base around pool.
 59.00 Ravine about 50 ft. deep. 2. ch. wide. Curv. N. 60° W.
with limestone outcrop on sides.
 71.00 Ravine about 20 ft. deep. 10 dm. wide. Curv. N. 89° W.
 80.00 It is a pool 14 x 6 ft. long. Lino. sq. with a white glass
drachin oval marks. containing a slip of card board
marked "Cor 6 S[°] E[°] 19.25. 20.25; 18.17, 18.17 W."
12 in. in the ground for Cor. 4 Dens. 14.25. 20.25
marble.

T. 131 N. S. 17 on N.E.

8.78 W., 6.20 on S.E.

6.25 on S.W. and

8.74 W., 6.21 on N.W. face

with 4 notches on N. & bridge on S. edges. dug
pit 14 x 6 x 1 dm. in each sec. 5 ft. dist. and
raised a mound of earth. 1/2 ft. high. 1/4 ft. base
around pool.

Shows no traces of the corner described in the
field note of original survey.

Lands leveling.

Brick Bank Limestone. 2nd var. No center.

Survey of Range Line through Township 18 North
Sec. 18, Range 18 West, May 1879

Chamis

North line, sec. 18 west.

Var. $144^{\circ} 32' E.$

40.00 Set a post 3 ft. long. 3 in. sq. with a white glass bracket with circles, containing a slip of card board marked "40.0" 12 in. in the ground. for 1/4 sec. cor. marks 1/2 8 on N. face. dry pile 18 x 18 x 16 in. N. E. of post. 8 1/2 ft. dist. and raised a mound of earth 1 1/2 ft. high. 8 1/2 ft. base around post. The 1/4 sec. cor. described in the field notes of original Survey is 6 cha 4 rods. East of line. Mounds and post gone but traces of 2 piles were found.

44.80 Dry channel cedar side. Course N. 89° W.

80.0 Set a post 1 1/2 ft. long 4 in. sq. with a white glass bracket with circles, containing a slip of card board marked "Cor. to 88 1/2, 18, 19 rods. 11 1/2 ft. No. 18779; W" 12 in. in the ground for Cor. to sec. 18, 19, 19 rods. Marked.

8.18 N., 8.18 on N. E.

8.18 W., 6.19 on S. E.

6.20 on S. W. and

8.19 W., 6.18 on S. W. faces.

with 3 notches on N. E. edges. Aug pile 18 x 18 x 16 in. in each sec. 8 1/2 ft. dist. and raised a mound of 2 ft. high. 11 1/2 ft. base around post.

Rand rolling.

Light sandy loam. 2' soil.

No timber.

North line, sec. 18 west.

Var. $144^{\circ} 45' E.$

0.15 Set cor. to sec. 18, 18, 19 rods. describes in the field notes of original Survey is 6.40 cha 8 1/2 of line. Devoid of all markings on N. E. and raised a mound. and two piles.

Survey of Range Line through Township 101 North.
Sec. 34 Range. 780779 west. Oct P.M.

Chain	
22.90	Flying Cliff at Ft. Yuma. Lat. $34^{\circ} 49' 0''$ W.
40.00	Bit a post 3 ft. long. 3 in. sq. with a white glass drachm oval contest. containing a slip of card board marked "1/4 5" 1/2 in. in the ground. For 1/4 Sec. Dr. marked 1/4 8 on W face. Dug pit 18x18 x 1 in. 3 ft. of post. 5% ft. dist. and raised a mound of earth 1/4 ft. high. 3 ft. base around post.
40.80	The original 1/4 Sec. corner described in the field notes of the former survey. is 644 Ch. East. of line. Stone marked is on W. with 2 pits.
80.00	Bit a post. 1 1/2 ft. long. 4 in. sq. with a white glass drachm oval contest containing a slip of card board marked "C. 6 8" 7/12, 1 3 7/6. T. 10 1/4" R.S. 780779 W" 1/2 in. in the ground. For C. 6 Acre. 7/12, 1 3 7/6. marked. T. 10 1/4 N. S. 7 on N.E. R. 7 8 W. S 18 on S.E. S 13 on S.W. and R. 7 9 W. S 12 on N.W. face. with 2 notches on N. & 2 notches on S. edges. depth 18x18x1 in. in each sec. 5% ft. dist. and raised a mound of earth. 2 ft. high. 1 1/2 ft. base around post. Sand rolling. Soil sandy loam. 2' soil. 60' timber.

North Ext. Sec. 7812.

Va. 14° 3.5' E.

84.00	Dynamite Holeside. Total 8.47 ft.
40.00	Bit a post 3 ft. long. 3 in. sq. with a white glass drachm oval contest. containing a slip of card board marked "1/4 5" 1/2 in. in the ground. For 1/4 Sec. Dr. marked 1/4 8 on W. face. Dug pit 18x18x1 in. 3 ft. of post. 5% ft. dist. and raised a mound

Survey of Range Line through Township 10th north.
Bellevue Range 7th west of C.M.
Shows

	of earth 1½ ft. high. 3½ ft. base around post. The trace of the 1 st Sec. Dr. describes in the field noted of original survey.
80.00	Set a post 4½ ft. long. 4 in. sq. with a white glass drachm vial attached containing a cup of lead board markers. "Cor. 6 S ⁸ 1/16. 1812. T. 10 N. R. 7 W." 14 in. in the ground, for Dr. 6 Dres. 1/16. 1812. Marked.
	D. 1812., S. 6 on N. E.
	A. 98°W., S. 7 on S. E.
	S. 130°E. SW. and
	A. 77°W., S. 1 on N. W. faces. with 1 notch over 2 or 3 notches on S. edges. avg. pit 6 1/2 18 x 12 in. in each sec. S. faces. and raised a square of earth 2 ft. high. 4 1/2 ft. base around post:
	Bands rolling.
	bait Pardy dinner. 2 bush.
	No timber.
	November 2 nd 1881. at noon impossible to take Lat. with Solar attachment.
	March 1st. Sec. 186.
	" " Var. 10° 00' E.
02.86	Same Cor. & Secs. 1, 6, 7, 8 th of the former Survey. is. 5. 82 3 chains. East. of line. Bait in round with 1 notch over 2 or 3 notches on S. faces 4 pit.
8.20	Bait in about 5 ½ ft. deep. Cross N. 20° E. Heavy out crop of sandstone on side.
20.00	End after Beams Rock bottom.
40.00	Set a post 8 ft. long. 4 in. sq. with a white glass drachm vial attached containing a cup of lead board markers. "4. 5" 12 in. in the ground, for 1/4 Sec. Dr. marked & Son 20. of sec. Bait pit 11 x 10 12 in. N. W. of post 5 ½ ft. dist. and raised a

Resurvey of Range line, through Township 181 North.
Part Range 78079 resur. & P. M.

	mound of earth $1\frac{1}{2}$ ft. high. $8\frac{1}{2}$ ft. base around post.
	No trace of $\frac{1}{4}$ acre cor. described in the field notes of original Survey.
46.00	Little Beaver Creek. 50 rods wide. Survey N. 44° E.
51.00	Dam " " 60 " " N. 80° W.
	an occasional one on banks.
51.50	Leave Little Beaver and bottom.
56.00	Pavilion about 50 ft. sq. 20 rods wide. Survey N. 89° W.
58.00	Step posts $1\frac{1}{2}$ ft. long. This sq. rock architrave marked with circles containing a slip of card board marked. Ch 6 S 181 182 N, R 78079 W. 12 in. in the ground, fr. Fr. 6 Post. 130 110 N, R 7 78079 W. marked
	T. 182 N, S. 110 W. S.
	R. 78 W, S. 60 W. S. E.
	T. 181 1/2 N, S. 100 W. and.
	R. 79 W, S. 86 W. N. W. faces
	with 6 months on each edge. On this are 40 ft. 6 in. long dashes on each line. N. S. E. W. of post. 6 ft. dsh. and raised a mound of earth $2\frac{1}{2}$ ft. high. Dm fr. base around post.
	Land rolling.
	Soil sandy loam, on rolling. 2' soil. in bottom black alluvial 5' soil. No timber except a few. snagging trees on the banks of Little Beaver Creek.

General Description

The Township on each side of the line are
high and rolling, with a 2' soil soil. Sandy
loam.

They are watered by Little Beaver Creek, a
stream with high banks. Hard gravelly

Survey of Range Line through Township 1817.
Res. Surveyor George W. C. Sch P. M.

bottoms, and clear from water.

On each side of this creek, a broad strip of level bottom is found admirably adapted for cultivation. The high and rolling portions of the township are well adapted for grazing purposes.

No timber is found in either of these townships with the exceptions of a few straggling trees on the banks of Little Beaver Creek.

Nov. 24, 1881.

W. W. Suffred.
U. S. Deputy Surveyor.

Survey of Range line through Township 132 north
Range 180 of S. Range. of 800 grmt. Oct 2. M.

From corner to Township 131 & 132 north
Ranges 180 & 190 west, which is a good. line. sq.
marked.

T. 132 N., S. 31 on N.E.

R. 180 W., 8.6 on S.E.

T. 131 N., S. 1 on S.W. and.

R. 180 W., S. 36 m. 11.40 face.

with 6 marks on each edge, and pile 41.8.80
W. of post. 6 ft. dist. and a mound of sand
around post.

Drawn.

North lat. Dec. 31, 1806.

Variation 36° E.

.50 The Township corner of the former Survey is .50
Ch. E. with no signs whatever of post or mound
with a shallows pit - only end removed.

.52-53 Ravine about 5 ft. deep. with a stream of water
in center. 6 ft. wide. Burne 8.46° W.

.50.00 At a post off. long. 3 ins. sq. with a white glass
broken vial added containing a slip of card
board marked "45" 1/2 ins. in the ground. for
1/2 acre. cor. marked 1/8 on W. face. Dug pile 18 x 18 x 12
ins. H. 8. of post. 6 ft. dist. and raised a mound
of earth 17. ft. high. 3 ft. base - covers post.
No trace of 1/4 acre. cor. described in the field notes
of the original survey.

.52.70 Ravine about 4 ft. deep. 10 ft. wide. Burne 8.07° E.

.50.00 At a post 4 1/2 ft. long. 3 ins. sq. with a white glass
broken vial added. containing a slip of card
board marked "45 1/2" 20. 8. 0. 01806, T. 132 N., R. 180
W." 1/2 ins. in the ground. for Dr. W. Acre. 74.86. 31806.
marked.

T. 132 N., 6.80 on N.E.

R. 180 W., 6.01 on S.E.

8.86 on S.W. and

R. 180 W., 6.75 on N.W. faces.

Survey of Range Line through Township 18th North.
Belvoir Range. Georgia west. 5th Ave.
Shares

with 5 notches on N. and 1 notch on S. edges. Dug pits 18 x 18 x 12 ins. in each sec. 5^{1/2} ft. dist. and raised a mound of earth 2 ft. high. 14 ft. base around foot.

No trace of corner described in the field notes of the original survey.
Land rolling.

Soil sandy loam. 2' soil.

No timber.

Nov. 24, 1881.

North Sec. Dec. 25 1881

Via 1st 35° E.

\$ 6.73 Wagon Road. Below 5.89° W.

40.00 Set a post 3 ft. long. Dist. as. with a white glass thermometer bottle containing a slip of card board marked "1/2 6" 12 ins in the ground. for 1st sec. as. marked 1/2 6 on W. face. Dug pit 18 x 18 x 12 ins. 14 ft. and 8 of pors. 5^{1/2} ft. dist. and raised a mound of earth. 1^{1/2} ft. high 2^{1/2} ft. base around foot.

80.00 Set a post 14^{1/2} ft. long. 4 ins. as. with a white glass thermometer bottle marked containing a slip of card board marked "Br 6 5° 19.34 25 8 30.7102 N. 70° 18.079 W." 12 ins in the ground. for Br. 6 pors. 19.34 25 8 30.7102 marked.

R. 135 M., 6 19 on N. E.

A. 7 8 W., 6 30 on S. E.

8 26 on S. W. and

R. 19 20, 6 25 on N. W. faces.

With 5 notches on N. & 2 notches on S. edges.
Dug pits 18 x 18 x 12 ins. in each one 5^{1/2} ft. dist. and raised a mound of earth. 2 ft. high. 14 ft. base around foot.

Land rolling.

Soil sandy loam. 2' soil. No timber

Survey of Range Line through Township 132 West.
Bd. Range. 7807 & West C. P. W.

chains

North lat. sec. 19 & 30.

Var. $14^{\circ} 30' E.$

- 2.73 The original corner of the former survey for Sec. 19, 2d, 25 & 30. is at the S. E. of line. Finds a post 2 ft. long. 2 ins. sq. without marks of any description except the notches, of which there were 4 notches on N. and 2 notches on E. side and 16 pins, from which a Burr Oak 8 inches in diameter. Sec. 1. $22^{\circ} E.$ on W. side. T. 82 N. R. 78 E.
- 8.20.
- A. Burr Oak 9 ins. in diam. L. N. $20^{\circ} W.$ 1 ch 69 ft. distant. no marks. T. 82 N. R. 78 E.
- No cardinal points for either township or Range are marked on the bearing trees. Nor is P. T. marked on either tree.
- 11.20 A ravine about 60 ft. deep. 40 rods wide. Course $20^{\circ} W.$ rich with scattering Oak trees, and outcrop of sand stone, on the sides.
- 16.20 Ravine about 50 ft. deep 20 rods wide. Course $24^{\circ} 30' W.$ rich with scattering Oak trees on the sides.
- 22.60 Ravine about 40 ft. deep. 10 rods wide. Course $24^{\circ} 30' W.$
- 40.00 A post 8 ft. long. 3 ins. sq. with a white glass drachm vial coated containing a slip of card board marked "T. 82 1/2 ins. in the ground. for Dr. G. Sec. 11. marks 1/8 on W. face. 16 pins 16 x 18 x 1 mm. 1/8 of post. 8 ft. high. end raised a mound of earth 1 1/2 ft. high. 8 ft. high. around post.
- 70.00 Ravine about 40 ft. deep. 10 rods wide. Course $24^{\circ} 30' W.$
- 80.00 A post 4 1/2 ft. long 4 ins. sq. with a white glass drachm vial coated containing a slip of card board marked "Dr. G. 85 1/2. 18. 19 1/2. T. 82 N. R. 78 E. 1/2 ins. in the ground. for Dr. G. Sec. 10. 18. 19 1/2. L. marks.

T. 18 N., S. 19 on N. E.

R. 78 E., S. 19 on S. E.

6 feet on S. W. and

" "

Survey of Range Line through Township 137 West.
Bellevue Range. 7807 & West. 5th S. M.

Chains

		<p>W. 74 W., 5. 10 on N. 20. face with 3 notches on N. 10. edges. Long pit 16' 6 1/2 in. in each sec. 5 1/2 ft. dist. and raised a mound of earth. 2 ft. high. 4 1/2 ft. base around post. <small>Post hole diameter 12 in. depth 18 in.</small> Land rolling. Soil sandy loam. 2' soil. No timber except straggling trees in Ravine. Nos. 75 & 1891 at noon observed Latitude with solar attachment. Nas. 46° 13' 41".</p>
		<p>North Det. Secs. 138 & 8.</p> <p>Va. 14° 35' E.</p>
2,79		<p>The original lot. of former Survey for Secs. 1, 8, 19, 16, 13 & 10 - chains & all of line. Finds a stone, with 3 notches on N. 10. Edges with 1 pit.</p>
20,30		<p>Big Beaver Creek. 1. Chain wide. Above S. 30° W. A stream of pure water, with high banks, and gravelly bottoms, and scattering oak trees on banks.</p>
40,00		<p>Sets a post 8 ft. long. 2 in. sq. with a white glass broken and contains containing a slip of card board marked 46° 5' 16" in. in the ground for 16 Sec. cor. marked 1/4 8 on N. 20. face. Long pit 18' 6 1/2 1/2 in. at top. 5 1/2 ft. dist. and raised a mound of earth 1 1/2 ft. high. 3 1/2 ft. base around post.</p>
40,00		<p>Wagon road above S. 30° W.</p>
77,60		<p>Ravine about 3 1/2 ft. deep. 16 cedar trees. Cor. 46° 5' W. with a few small oak trees on the sides.</p>
90,00		<p>Sets a post 14 ft. long. 2 in. sq. with a white glass broken and contains containing a slip of card board marked "Cor 46° 5' 1/2 18 1/2, 7 1/2 24 7 1/2 18 1/2 7 1/2 20 1/2 in. in the ground for Cor. 6 Secs. 7 1/2 18 1/2 7 1/2 marked.</p>

Re-survey of Range line through Township 182 north.
R. 78 W., 1879 & West. S. & P. M.

Name

T. 182 N., S. 9 on N.E.

R. 78 W., S 10 on S.E.

S. 18 on S.W. and

R. 79 W., S. 17 on N.W. faces.

with 2 notches on N.W. notches on S. edges.
Dug pits 18x18x12 ins. in each sec. 5 ft. deep.
and raised a mound of earth. 2 ft. high. 4 ft. base
around front.

Walls rolling.

Soil sandy loam. 2' soil.

No timber except straggling trees on big draw
bank, and in ravines.

North Sec. line. 9712.

Varied 0° E.

4.00 The original sec. of former survey for line of sec.
18.712. is 4.21 less. E. of line. I find a stone
with 2 notches on N.W. notches on S. edges.
4' pit.

4.08 Ravine 5' off. deep. 20 est. wide. Dug 8.89° W.
with scattering east trees on sides.

16.00 Ravine about 10 ft. deep. 16 est. wide. Dug 8.88° W.

22.00 Ravine " 60 " " 20 " " 8.86° W.

26.00 Ravine " 80 " " 10 " " 8.89° E.

40.00 Let a road 10 ft. long. Bur. sq. with a white glass
drunken vital article containing a slip of coarse
board marked "7x6" 12 ins in the ground. for
the Rec. Com. marked 1/4 on N.W. face. Dug pits
18x18x12 ins. N.W. of post. 5 ft. deep. and raised
a mound of earth. 1 1/2 ft. high. 3 ft. base
around post.

44.00 The original 1/4 Sec. L. of the former survey
is 4 chains and 42 rods. E. of line. I find a
stone marked 1/4 on N.W. side, and 2' pit.

60.80 Ravine about 20 ft. deep. 10 est. wide. Dug. 8.89° W.

Survey of Bangs Line through Township 132 and
Between Bangs. T. 18 S. R. 77 W. 5th P. sec.
Chain

	80.00	Set a post $4\frac{1}{2}$ ft. long. Burns. sq. with a hole glass broken in it. Containing a slip of card board marked "C. 6 S' 1.6. 7112, T. 18 S. R. 77 W." 12 ins. in the ground for Sec. 6 line. 1.6. 7112. Marked T. 18 S. R. 77 W. 12 ins. R. 78 W., S. 1 on E. S. S. 12 on S. W. and R. 79 W., S. 1 on N. W. face with 1 notch on N. & 5 notches on S. edges. Dig pit 18 x 18 x 12 ins. in each sec. 8 ft. dist. and raised a mound of earth 8 ft. high $4\frac{1}{2}$ ft. base around post. Bank rolling. and intersected with narrow ravines the sandy loam 2' thick with one crop of sand stone on mounds. No timber except straggling trees on the sides of the ravines.
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North Sec. 2 sec. 186.

Va. 110° 32' E.

	44.25	The original corner of the former survey for secs. 1.6. 7112. is. 80.00 dist. E. of line. 8 ft. dist. a post with 1 notch on N. and 5 notches on S. sides. A pit 80.00 ft. post 8 ft. long. Burns. sq. with a hole glass broken in it containing a slip of card board marked "4.5 73 in the ground for 1/4 sec. 2. marked 1/4 on N. W. face. Dig pit 18 x 18 x 12 ins. N. & S. of post. 8 ft. dist. and raised a mound of earth. 8 ft. high. 8 ft. base around post. Crosses the 8th Standard Parallel at a point 5 Ch. 64 Lks. East of the S C 6 line. 82. 18 S. T. 188 N., R. 78 W. At which point I established a closing cor. for Township 132. Bangs. T. 18 S. R. 77 W. as follows
	48.75	

Survey of Range Line through Township 132 North
Range 100 West, 1887, 4 rods. 5th P. M.

As a gross $4\frac{1}{4}$ ft. long. 4 rods. 5g. with a white
glass, broken vial inside, containing a
slip of card board marked "C.C. 6 88 132 N. R. 100
W. 5th P.M."

C.C. T 132 N. on S.

R. 100 W. S 6 on E. and

R. 100 W. S 1 on W. face.

with 6 notches on S. E. W. faces, one per 2 $\frac{1}{2}$ ft. 16 ft. 6 in.
crossing on each line. S. E. W. of poles. 6 ft. dist.
and raised a mound of earth $2\frac{1}{2}$ ft. high. off base
around foot.

The C.C. 6 Dec. 82 1883, T 132 N., R. 100, is crossed
with 8 pits 31. 6 ft. W. but no post.

The original closing st. of the former Survey is
also 80 rods. E. of new closing corner, where I
find 3 pits 6. 5. 7 W. of corner, with mound but
no post.

This section line bet. Secs. 1. & 6. is very short
being only 14. 74 in length. and the entry
in the original field notes, describing this line,
as 43. 61 chs. long. is clearly an error. of 1 ch. 68
chs. less than its true length.

Land rolling.

Soil sandy loam 2° soil

No timber.

Nov 3d. 1881.

General Description

The townships on each side of this line are
high and rolling, and intersected with deep and
numerous ravines with a 2° soil sandy loam soil.
They are watered by Big Beaver Creek, a stream
of clear pure water, with high banks, and
gravelly bottom.

34.

Survey of Range Line, through Township 102nd N.
Sect 8 & 9 Range 98 & 99 West, 5th Q.M.

These Townships are not well adapted
for cultivation but are good for grazing pur-
poses.

The only timber found in either Township is
on the banks of the Big Beaver Creek, or in
the ravines.

Nov 20, 1881.

W. W. Duffield
U. S. Deputy Surveyor.

List of Names.

A list of the names of the individuals employed by W. H. and W. Duffield. U. S. deputy surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the meridian line through Township 129, Range 13, North, and between Ranges 188 and 190 west of the 5th Principal Meridian.

in the Territory of Dakota showing the respective capacities in which they acted:

Will W. Duffield, foreman
 Edward M. Brown, Carpenter. Edward Hayes, Carpenter.
 James Kiesau, Chas. Bunting, Harry Buff, and Austin W. C. Mountsides. Herbert O'Dell, Frank Tracy, George, Ernest, and Chas. Daniels, Chapman, C. Charles Hayes and George Burnett, Carpenter and John O'Gray.

Final Oaths of Assistants.

We hereby certify that we assisted Will W. Duffield, U. S. Deputy Surveyor, in surveying all those parts or portions of the surveying of the meridian line through Township 129, Range 13, and 128, north between Ranges 188 and 190 west of the 5th P. M.

Territory of Dakota, as represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the U. S. surveyor general for Dakota.

Will W. Duffield, Edward M. Brown,
 Austin O'Dell, Frank Tracy, Herbert C. Mountsides,
 Charles Daniels, Ed. Hayes, James Kiesau, Charles Bunting,
 Harry Buff, A. W. Codd.

Subscribed and sworn to before me this
 17th day of December 1881

John A. Weis

Notary Public

wayne T. mich.

Final Oath of U. S. Deputy Surveyor.

I, William W. Duffield, U. S. deputy surveyor, do solemnly swear that in pursuance of instructions received from Cortez Fessenden, U. S. Surveyor General for Dakota, bearing date of

27th day of October 1881, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the U. S. Surveyor General for Dakota, the surveying manual, and the laws of the United States, surveyed the Meridian line through Townships 129, 130, 131 & 132, north, Section Range 7, 1879 west of the 5th Principal meridian.

in the Territory of Dakota, as are represented in the foregoing field notes as having been surveyed by me and under my directions; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the surveying manual, printed instructions, the special written instructions of the U. S. Surveyor General for Dakota, and in the specific manner described in the field notes, and that the foregoing are the true field notes of such survey, and should any fraud be detected I will suffer the penalty of perjury under the provisions of an act of Congress approved August 8, 1846.

William W. Duffield
U. S. Deputy Surveyor.

Subscribed and sworn to before me this
17th day of December 1881

Geo A. Weis
Notary Public.

Approval. Wayne Michigan

U. S. Surveyor General's Office,

Funkton, D. T. December 22, 1881

The foregoing Field Notes of the survey of the Meridian line through Townships 129, 130, 131 & 132 north between Waynes, 1879 west of the 5th Principal

Meridian, in Dakota Territory, executed by William W. Duffield.

under his contract of October 27, 1881, in the month

of November 1881, having been critically examined, the necessary corrections and explanations made, the said Field Notes and the surveys they describe, are hereby approved.

Cortez Fessenden
Surveyor General.

I Certify that the foregoing transcript of the field notes of the survey of the Meridian line 1879 west of the 5th Principal Meridian in the Territory of Dakota, has been correctly copied from the original notes on file in this office.

Cortez Fessenden
Surveyor General.